

Find the matrix M of the linear transformation $T : \mathbb{R}^3 \rightarrow \mathbb{R}^2$ given by

$$T \left(\begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix} \right) = \begin{bmatrix} -8x_1 + x_2 + (-9)x_3 \\ -5x_1 + 9x_3 \end{bmatrix}.$$

$$M = \begin{bmatrix} \boxed{} & \boxed{} & \boxed{} \\ \boxed{} & \boxed{} & \boxed{} \end{bmatrix}$$

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$$M = \begin{bmatrix} \boxed{-8} & \boxed{1} & \boxed{-9} \\ \boxed{-5} & \boxed{0} & \boxed{9} \end{bmatrix}$$